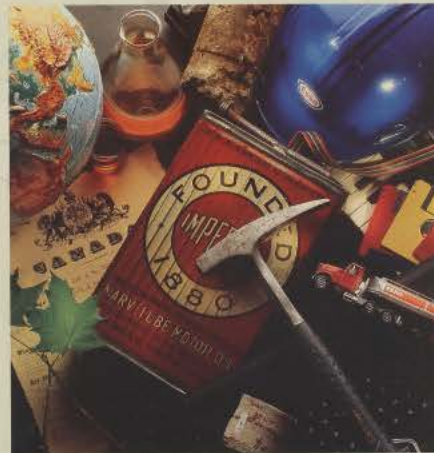




The Story of Imperial Oil



1880

1900

1920



1880

Sixteen southwestern Ontario oil refiners pool their resources and form The Imperial Oil Company in London, Ont., to find, produce, refine and distribute petroleum and its products in Canada.



1898

In need of expansion capital, Imperial sells a majority interest to the Standard Oil group in the United States.

1899

Imperial takes over all of Standard's Canadian assets, including a refinery in Sarnia, Ont., and moves its operations and head office there.

1883

Imperial moves its operations to Petrolia, Ont., after lightning strikes its London refinery.

1893

Twenty-three branch offices, from Halifax to Victoria give Imperial a presence throughout Canada.

1914

Imperial forms a subsidiary, the International Petroleum Company, Limited, to search for oil in South America.

Imperial builds a refinery at Burnaby Inlet, east of Vancouver.

1916

Refineries are built at Regina and Montreal.

1918

Imperial becomes the first company in Canada to adopt a system of joint industrial councils, an innovative approach to labor-management relations.

Imperial builds a refinery at Dartmouth, N.S.



1920

Imperial discovers oil just south of the Arctic Circle, at Norman Wells, N.W.T., on the Mackenzie River.

1923

The Calgary refinery starts operations.

1924

Dr. R. K. Stanford is hired as Imperial's first research chemist.

The Imperial Story

Canada, as a country, was only 13 years old when The Imperial Oil Company was born. Since that time the company's history has been, in many ways, a reflection of the development of the country itself. As Canada has grown, Imperial has grown with it, sharing its prosperity, weathering the tough times and making its own modest contribution to the nation's economic and cultural progress. This brief history of Imperial is dedicated to its customers, employees, sales associates and shareholders and to all Canadians. It is they who have made it possible.



Imperial Oil

1880

1900

1920

1940

1960

1970

1980

1990



1880
Canadian and American investors buy refineries in their respective areas and form the Imperial Oil Company in London, Ont., to test products, refine and distribute petroleum and its products in Canada.



1898
Instead of expensive capital, Imperial Oil's line gives investors the Standard Oil process in the United States.

1899
Imperial takes over all of Standard's Canadian assets, including refinery in Sarnia, Ont., and moves its operations and head office there.

1903
Imperial moves its operations to Port Hope, Ont., after acquiring assets in London refinery.

1905
Twenty three British oil firms buy Manitoba's Viceroy gas. Imperial's presence throughout Canada.

1914
Imperial forms a subsidiary, the Canadian Petroleum Company, Limited, to search for oil in South America.

Imperial builds a refinery at Sarnia, Ont., east of Windsor.

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Refineries are built at Regina and Montreal.

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Imperial becomes the first company in Canada to adopt a system of joint industrial councils, an innovative approach to worker-management relations.

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Imperial discovers oil just south of the Arctic Circle, at Norman Wells, N.W.T., on the Mackenzie River.

1923
The Calgary refinery starts operations.

1924
Dr. R. K. Stanford is hired as Imperial's first research chemist.



1936
Imperial sponsors hockey night in Ontario's first hockey broadcasts for the first time.

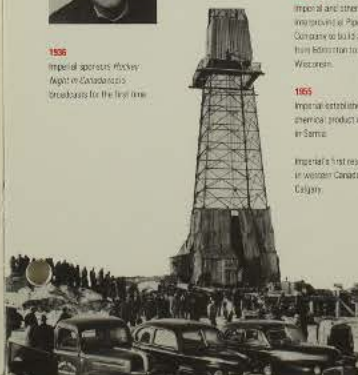
1942
Imperial joins the Canadian and U.S. governments in Canada's project to provide fuel for the U.S. war effort in the northern Pacific.

1947
A major oil discovery at Leduc, Alta., by Imperial signs the real beginning of Canada's role as a major oil producer.

1949
Imperial and others form the Western Canadian Pipeline Corporation to build a pipeline from Edmonton to Superior, Wisconsin.

1955
Imperial introduces a chemical product department in Sarnia.

Imperial's first research centre in western Canada opens in Calgary.



1957
Imperial opens its first petrochemical plant, in Sarnia.

1958
The corporate name of the company becomes Imperial Oil Limited.

1964
At Cold Lake, Alta., Imperial begins an experimental program to extract bitumen from the oil sands.

1969
Imperial opens a world-scale fertilizer complex near Redwater, Alta.



An Imperial subsidiary opens Airtex Airtex facility for the marketing of private and business aircraft.

1970
Imperial discovers Canada's first Arctic oil at Arcturion Point on the Beaufort Sea.

The chemical department becomes Esso Chemical Canada, a division of the company, established to handle Imperial's rapidly expanding chemical activities.

Imperial's first self-service stations open in Montreal and Toronto.

Imperial becomes the first company in Canada to introduce low-level gasoline.

1971
The company discovers natural gas at Tagu in the Mackenzie Delta.



1972
Imperial begins construction of the first artificial island in the Beaufort Sea to be used for exploration drilling.

1975
Refineries in Edmonton, Regina, Winnipeg and Calgary are replaced with the new and state-of-the-art refinery on the outskirts of Edmonton.

1976
Esso Petroleum Canada Limited, a Calgary-based wholly owned subsidiary, is formed to manage all of the company's natural resource activities.



Production starts at Syncrude, the world's largest oil sands mining operation, located in northwestern Alberta. Imperial is a major participant.



Imperial introduces Canada's first premium unleaded gasoline.

1981
A new oil tanker, Esso Petroleum Canada, is formed to manage the company's petroleum product operations.

1985
Production of automotive lubricants begins at Cold Lake, Alta.

As the Norman Wells oil field in the Northwest Territories, a three-year exploration program is completed, the largest single project in the company's history.

Imperial purchases Tenasco Canada Inc., the second largest company acquisition in the nation's history.

Imperial builds a new research centre at the University of Calgary Research Park.

1986
Sixty years after research began in Sarnia, the new Sarnia Process and Associated Research Centre opens.

1988
The company offers new products that are more environmentally friendly to provide more on gasoline.

Imperial's line made from petroleum and a new generation of agricultural products, which develop more crop yield while using less fertilizer.

Imperial's first self-service stations open in Montreal and Toronto.

The Early Years



In the beginning

It began, like so many other things in Canadian history, as an underdog's struggle. Going into the 1870s, southwestern Ontario was smug, healthy and wealthy. It was the oil capital of Canada and the birthplace of the North American oil industry. James Miller Williams had sunk the continent's first oil well there in 1857. Dozens of others after him had feverishly punched shallow wells near places called Oil Springs, Black Creek and Petrolia and had watched the black crude oil come bubbling to the surface. Sometimes it ran in wasteful streams across the land and into the rivers, but nobody cared or really understood the waste.

Refineries cropped up everywhere – rickety wooden buildings with open fires that boiled the crude oil, separating it into its various basic parts, or fractions. London became the prosperous hub of it all with 52 refineries at one time. Oil was even exported to Europe. Then, in 1876, the bubble burst.

The Canadian oil industry plunged into a depression.

Everyone blamed the Americans, but they were only part of the problem. Cheaper, sweeter-smelling crude oil from Pennsylvania had, indeed, cornered overseas markets and even some in Canada. But Canadian producers had glutted their own market. Canadian kerosene – then known as coal oil and used for lighting and cooking – was the main refinery product. Once selling for \$35 a barrel, it slumped to \$4.20. Established refineries sold out at distress prices.

Many farmers-turned-oilmen hastily decided to return to the plough.

That's when 16 Canadians decided that in unity there would be strength. They got together \$25,000 and, on September 8, 1880, formed The Imperial Oil Company. It was a make-it-or-break-it gamble, but, they thought a good one. Their charter was to find, produce, refine and distribute petroleum and its products throughout Canada. The new company was centred in southwestern Ontario. It had its headquarters in London, a refinery there and another in Petrolia, 27 kilo-

metres east of Sarnia. Total capitalization was \$500,000 – a magnificent sum at that time.

Imperial's founders had two priorities: to produce better products (in those days mainly lamp oil, axle grease and other lubricants, wax and candles) and to develop new markets. They set about achieving both with characteristic energy. They adopted a method to help rid kerosene of some of its sulfurous, skunky odor and they imported from Austria a new type of kerosene lamp that had a flat wick and a perforated burner that burned brighter and more cleanly.

In search of new markets they turned less to the intensively competitive East than to the West – to the thinly populated Prairies and beyond the forbidding Rockies to a remote region of the Dominion, British Columbia. The lifeline of confederation, the long-promised but much-delayed transcontinental railway, was finally under construction, and the homesteaders who would follow it would need lamp oil and axle grease.

Thus Imperial played a pioneering role in opening up the Canadian West. Even after the last spike of the Canadian Pacific Railway was driven



Frederick Fitzgerald



Jacob Englehart



Isaac Waterman



John Geary



John Minihinnick



Thomas Smallman



John Walker



Thomas Hodgins

The founders of The Imperial Oil Company

The founders were mostly young, but they all had experience in business around London or Petrolia and had already dabbled in oil. The first president, Frederick Fitzgerald, 40 years old, was

a builder of the London Water Works and had business interests in groceries, furniture, liquor and oil. The vice-president, Jacob Englehart, at age 33 already had 14 years

experience in oil. He'd started his own refinery at age 19. Now a dapper entrepreneur who always wore a flower in his buttonhole, Englehart was the organizational genius of the group.

William Spencer, who helped develop the earliest Canadian oil field and built one of Canada's first refineries, brought his sons, William and Charles, into the new company. Herman and Isaac

Waterman had also built a refinery; its products won them a prize at the Paris Exposition in 1887. Isaac was involved in municipal politics and was prominent in other

companies, including the London Street Railway Company. John Geary was a lawyer-turned-refiner and John Minihinnick a plumber-turned-refiner. Thomas Smallman and John Walker

were associated with the first Canadian chemical company to manufacture sulfuric acid, before branching into oil refining. Walker also became active in federal politics. Then

there was Thomas Hodgins, a former carriage and wagon maker, and his brother, Edward, who manufactured wooden oil barrels. Joseph Fallows, William English and William Cooper made up the

remainder of the 16 founders. Together they brought stability, imagination and new vigor to the fledgling Canadian oil industry.



Above: Mica Axle Grease
"lightens the load and
shortens the road."

Right: horse-drawn delivery
of products in Winnipeg 1895
"when horsepower meant
horsepower"



in 1885, the company's products still creaked into remote settlements – mining and lumber camps, Hudson's Bay Company posts – in oak barrels aboard Red River carts, wooden wagons originally used for buffalo hunting. (Few settlers were tempted by the \$1.25 refund that Imperial offered for the return of its barrels; they were far too valuable as washtubs, rain barrels and, suitably modified, as armchairs.)

As a marketing strategy, Imperial's scheme to supply the West was brilliantly successful. By the end of its first decade the company had a chain of supply depots stretching from the Great Lakes to Vancouver. And, thanks to a new federal tariff on imported oil, things were going better in eastern Canada.

By this time Imperial had only one refinery, in Petrolia. Lightning had struck its London refinery in 1883, and it had burned down. Rather than rebuild it, Imperial had moved all its refining operations to Petrolia, which was located right in the oil fields, resulting in the virtual elimination of crude-oil transportation costs.

The Petrolia refinery became a model for its time. It employed 500 people, covered 26 hectares and was a self-contained operation. Imperial pumped oil from its own wells, piped it to the refinery or hauled it by horse-drawn wagon and turned it into kerosene, lubricating oils, axle greases, waxes and candles, shipping the products in barrels made in its own cooperage with wood from its own woodlots. It even made its own square oil tins, complete with faucets and screw caps, which customers used all over Canada and overseas.

The company grew at such a rate that by 1893 there were 23 branch offices from Halifax to Victoria – support for Imperial's goal to distribute petroleum and its products throughout Canada.

But success was to bring its own problems. Not only had American enterprises managed to capture a third of the Canadian market but, for the first time, demand for oil began to exceed supply, and there was a pressing need for expansion capital. It was not forthcoming in either Canada – then in a depression – or Britain, and Imperial looked for help south of the border. In 1898 Imperial sold a majority interest to the Standard Oil group in the United States. (Standard Oil Company (New Jersey) subsequently became Exxon Corporation, which currently owns 70 percent of Imperial.)

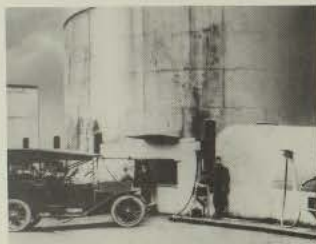
Imperial now had the necessary capital to carry on. On February 23, 1899, it took over all of Standard's Canadian assets, including its Sarnia refinery. Imperial then moved its operations and head office to Sarnia, laid a pipeline to bring crude oil in from Petrolia and began building 3,000 prefabricated bulk-storage tanks for the booming Prairie market. Now the company was on a firm footing to serve the entire country. Its 900-barrel-a-day Sarnia refinery would, it seemed, be adequate for years to come.

And then, chugging and sputtering down the road, came a funny contraption that would profoundly affect the future of Imperial and the lives of all Canadians.



Enter the horseless carriage

At the beginning of the 20th century, home for most Canadians was a farm house or small-town dwelling, where hoofbeats and bicycle bells sometimes gave way to the whistle of a passing train. Although a few mechanical wizards had been tinkering with the horseless carriage since the 1860s, nobody had taken them seriously. Even in the late 1890s, when the occasional electric car, steam car or smoke-belching gas buggy began showing up in a few cities, they were regarded as a joke. Hardly anyone really believed the automobile would ever replace the horse. By 1903 there were only 178 cars in all of Canada.



Canada's first service station opened in Vancouver in 1907.

But by 1910 there were nearly 6,000, and the gasoline-powered vehicle had proved far more practical than electrics or steamers. It wasn't long before the automobile became a national institution.

Some families mortgaged their homes to finance a car. Rural families often bought them even before they installed indoor plumbing.

With the growing popularity of the automobile, the market for gasoline grew rapidly. This took the oil companies by surprise. Gasoline, to this point, had been a minor byproduct of refining. Along with benzene and naphtha it was sold as a solvent, useful for cleaning ladies' gloves and as a fuel for special lamps. Suddenly it was in greater demand than kerosene. Oil companies were hard

Imperial symbols over the years

Since its creation in 1880, Imperial has seen some major changes in the symbols and emblems it uses to present itself to the public.



The Imperial Oil Company Limited's first emblem

In 1919 the company changed its name to Imperial Oil, Limited.



In the 1920s an easily recognized symbol identified Imperial's products and service stations.



During the 1930s Canada's favorite brand of automotive fuel was Imperial's 3 Star gasoline.



In 1946 the company's most enduring symbol made its first appearance.



During the 1970s and early 1980s the Esso name and oval became more prominent.



In 1988 a new corporate banner was created for the Imperial Oil family of companies.



Imperial Oil

The Story of Imperial Oil The Early Years



In 1916 customers stand nonchalantly under a covered driveway while a Ford fills up.

pressed to meet the demand and even harder pressed to dispense this automobile fuel to the customer.

The first motorists bought gasoline in cans or open buckets from the grocery or hardware stores where they normally purchased kerosene or directly from an oil-company warehouse. Then, one day in 1907, so the story goes, one of the spurting horseless carriages pulled up to Imperial's Vancouver warehouse to refuel alongside the horse-drawn tank wagons. Suddenly there was a loud bang; it sounded as if a pistol had been fired. Actually it was only the sound of the car backfiring, but the place was in pandemonium. Horses reared and teamsters cursed. When the fuss died down the warehouse foreman banished motorcars forever. The next day Imperial's Vancouver manager, C.M. Rolston, started Canada's - and, quite possibly, North America's -

first service station, outside the warehouse at Smythe and Cambie streets. It was a three-sided shed open to the street; a converted 60-litre hot-water tank painted red dispensed Imperial gasoline to cars at the curb through a garden hose.

The demand for gasoline revolutionized the refineries of the day. They now had to process a greater proportion of the crude oil into gasoline to meet that demand - quite the reverse of pre-automobile days. Imperial had to look beyond the rapidly depleting fields of southwestern Ontario for crude oil. In 1914 a pipeline was completed between Sarnia and Cygnet, Ohio, linking Canada to the mid-continental oil fields of the United States. That same year Imperial formed a subsidiary, the International Petroleum Company, Limited, to search for oil in South America. Fields discovered by that company were a major source of crude oil for Imperial refineries for many years. By the time

the company was sold in 1948 to help finance Imperial's Canadian expansion programs, its fields had yielded nearly 600 million barrels of oil.

In 1914 Imperial also sent a geological party to Turner Valley, near Calgary, where an oil discovery was causing great excitement. And, even in those early days, the far North came under Imperial's scrutiny as a possible source of new supply; the company's chief geologist, Dr. Ted Link, began preliminary surveys in the Northwest Territories.

The need for additional supplies of gasoline became ever more pressing. The automobile was gobbling it up – so was the new-fangled gasoline-powered tractor, which was beginning to replace steam tractors and horses on farms. ("A gallon of

gasoline can do as much work in an hour as a horse can do in a day," claimed the company's magazine in 1917.) And then there was the First World War, with its trucks, tanks and airplanes – which made unprecedented demands on petroleum producers.

The war was already on the horizon when, in 1914, Imperial built British Columbia's first refinery at Burrard Inlet, east of Vancouver – it didn't actually begin operating until 1915, because its first shipment of crude oil, from Peru, was captured at sea by a German raider. The company went on to build a refinery at Regina in 1916, one in Montreal the same year (which remained in operation until it was closed in 1983) and one at Dartmouth, N.S., in 1918.



Heavy chisels operated by spring pole sank the first wells at Petrolia, Ont.



The company's first research scientist, Dr. R. K. Stratford, joined Imperial in 1924.

That same year the first Canadian airmail flight took off, from Leaside, Ont. (now part of Toronto), for Ottawa. The aircraft was fueled from a horse-drawn Imperial oil wagon; at that time the company was alone in providing aviation service.

After the war Imperial practically rebuilt its Sarnia refinery, which became the largest in Canada, capable of processing 10,000 barrels of crude oil a day. A paraffin department produced paraffin oils, waxes and candles; another produced lubricating oils, cylinder oils and other specialized products; a cooperage made wooden barrels. There were special departments for the production of sulfuric acid and copper oxide, used in refining.

Automobiles, tractors, trucks and airplanes had marched the oil industry into the 20th century and toward new technologies. By 1920 there were more than a quarter-million motorcars in Canada – more than four times as many as in 1915. Speed limits had been increased to 30 miles (48 kilometres) an hour, and motorcars were capable of doing much more – "Going like 60" was the synonym for ultimate speed. Yet, as often as not, the cars' engines sputtered and knocked going up a hill and suffered from fouled carburetors. Engines were improved, and more efficient refining methods and better petroleum products were needed to keep up with these advances.

It was a challenge that was to launch Imperial into a program of research and development – the first of its kind in the industry – that marked the beginnings of the company's ongoing search for new and better ways of making petroleum products and of finding and producing crude oil.

The Story of Imperial Oil The Early Years

In the early 1920s Imperial acquired Canadian rights to improved refining processes developed in the United States and incorporated them into its new Calgary refinery in 1923.

The following year the company hired a 29-year-old chemist from Brantford, Ont., Dr. R. K. Stratford, to form a one-man research department. When he arrived at Imperial's Sarnia refinery to take up his duties he was not impressed with what he found. The equipment was, in his own words, "of the most primitive type," and there was no technical library. He started one himself, using his own textbooks.

From this less than auspicious beginning, however, there developed an impressive history of achievement. By the time he relinquished his position as head of the department in 1951 to become Imperial's scientific adviser, Stratford had expanded his department into an 83-member technical and research group, patented some 30 petroleum products and processes and supervised the development of countless others. Fourteen processes devised in his laboratory have been rated as major industrial achievements.

In the 1930s almost every refining process had become continuous, which meant that work could go on for months without interruption. Refiners began to install automatic controls to adjust valves, regulate pressures and temperatures and record every change.

As improvements to the refining process were made it became apparent that petroleum products were no longer limited to their natural properties. The unwanted low-quality parts of crude oil could

be changed into desirable new hydrocarbons, which in turn could be combined to form new and better products. Steep hills became less of a problem for the internal-combustion engine.

The scientific mind was also working on better ways of discovering oil. The well-equipped geologist of 1919 carried only basic surveying instruments: a hammer, field glasses and a camera. Often travel was by canoe or pack train. There was no way of investigating deeply buried formations; geologists could only make educated guesses about their structure based on surface signs. It was a wonder they located any oil at all.

Until 1919 wells were still being drilled with the same cable tool that the southwestern Ontario pioneer drillers had used – a heavy chisel-like tool at the end of cable. It literally punched a hole by being repeatedly raised and dropped. Imperial introduced Canada's first all-steel derrick in 1919 which permitted deeper drilling. When Imperial began its search for oil in western Canada in 1919 drilling techniques limited the prospective oil areas to depths of about 1,350 metres.

During the next 20 years new methods for oil exploration were developed. The rotary drilling rig, introduced to Canada in 1920, permitted the first significant deep drilling. In the 1930s Imperial began using geophysical instruments, and seismic surveying in particular, in the search for oil. These new techniques would later provide a big payoff.

Imperial goes to war

The outbreak of the Second World War in 1939 placed a huge strain on Canada's fledgling oil industry. The war absorbed most of the world's petroleum products. In any one day the Allied air forces used 14 times as much gasoline as did all Allied forces throughout the entire First World War. Tanks, trucks, planes and ships all needed fuel, lubricants and, eventually, synthetic rubber.

As Canada's largest petroleum company Imperial was of necessity deeply involved in the war effort. One of its first priorities was to gear up its oil fields and refineries to maximum output. In particular, Imperial produced a large part of the high-octane aviation gasoline needed to fuel the aircraft used to train thousands of aviators who came to Canada under the British Commonwealth Air Training Plan.

Imperial ships, like other vessels of the Canadian merchant service, went to war, and the whole operation of its tanker fleet changed. The company was asked to reroute its ships for service overseas and, in addition, to man a fleet of Panamanian flag tankers. The ports of loading for the company's tankers were still the same, but now their destinations lay overseas. They carried crude oil and associated products across the Atlantic to refineries in England and France.

With German submarines prowling the Atlantic it was a dangerous task. Altogether, during the war years, four company-owned ships and two other tankers manned by Imperial employees were lost in action; 77 men gave their lives. In



Captured by the Germans in 1941, the crew of the Imperial tanker *Canadoltie* was interned in a prisoner-of-war camp.



Refueling a Lockheed at Gander, Nfld. in 1945

March 1941 the Imperial tanker *Canadoltie*, with 44 men aboard, was fired upon and captured by a German ship, the *Kormoran*, off the west coast of Africa. The crew spent most of the war in a German prisoner-of-war camp.

On the east coast Imperial was part of Operation Shuttie, one of the war's best-guarded secrets. The operation kept American oil flowing to Great Britain during the two years before the United States entered the war in 1941. The oil was shipped up the seaboard from Aruba in the Caribbean and gathered in huge storage tanks, built by the British government on land adjacent to Imperial's Dartmouth refinery (the running of the operation was handled by the company). Although many tankers flocked around the refinery – neutral American vessels unloading their cargoes, British ships reloading for the trip overseas – the secret was well kept.

When supplies of rubber from Asia were cut off by the Japanese the Allied nations were forced to make synthetic rubber. Imperial cooperated with the Canadian government in the establishment of Polymer Corporation Limited, a crown corporation producing this vital material at Sarnia.

When Japan entered the war its brief occupation of two Aleutian islands served as a warning of the dangers that could face tankers carrying petroleum products to Alaska. The Americans decided they needed inland oil supplies safe from attack. Accordingly, a spectacular project, dubbed Canol (a contraction of "Canadian" and "oil"), came into being in 1942. The United States Army proposed to build a refinery at Whitehorse

The Story of Imperial Oil The Early Years

to be supplied with crude oil by a pipeline from Norman Wells, 960 kilometres to the east.

The U.S. armed forces needed 3,000 barrels of crude oil a day, but nobody was certain that the Norman Wells field could produce that much. A small new refinery had opened there in 1939 to serve the mines at Great Bear Lake in the Northwest Territories, but its capacity was only 840 barrels a day. Yet by January 1943 Imperial had drilled 60 wells for the project and was producing the necessary amount of crude oil. By early 1944 a pipeline snaked through the bleak mountainous land to the Whitehorse refinery, which operated for a year until the war was nearly over.

By the time the war ended Imperial employed more than 10,500 people. During 1946, which marked the start of Canada's postwar boom, it sold more products than it had in any preceding year. But, as the company's 1946 annual report stated, "Adequate supplies of crude oil and products were difficult to secure." Imperial was becoming hard pressed to find the crude oil necessary to meet the demands of a burgeoning postwar Canada. A significant oil field had not been discovered since Norman Wells in 1920.

A major new discovery was badly needed. Imperial turned its attention with renewed urgency to western Canada, a region of tantalizing promise but where exploration had yielded disappointing results for more than two decades.

The Quest for Energy



Perseverance pays off

Almost from the time the first Europeans arrived in western Canada there had been rumors of or traces of oil. In 1789 Scottish-born trader Alexander Mackenzie reported oil seepages along the Mackenzie River in the Northwest Territories. In 1866 rancher-adventurer John George "Kootenai" Brown collected oily muck to lubricate machinery in the Waterton area of southwestern Alberta. In the same region in 1879 Allan Patrick, a Dominion government land surveyor, stopped to help a native-Canadian boy with an injured leg and discovered his bandage was soaked with a native "medicine" that turned out to be crude oil. Patrick formed a company that actually found oil in 1901, but the rugged mountain terrain discouraged would-be developers.

In 1913 W.A. Dingman, an Ontario driller, formed a company to drill in Turner Valley, 55 kilometres south of Calgary. One day in May 1914 the Dingman well blew in with a daily flow of nearly

four million cubic feet of wet gas and light oil. Calgary went wild.

More than 500 oil companies were formed in a few days, although most had no assets other than the paper on which they printed their stock.

A year later the boom was dead. Lack of finances and knowledge of geology and oil production killed most of the companies. The First World War halted the few serious developments.

After the war Imperial began systematically to explore western Canada. In 1919 it sent 12 geological parties to study the great sedimentary area that sweeps from the U.S. border to the Beaufort Sea and from the Rocky Mountains to Manitoba. One party explored almost to the Arctic Circle, investigated Alexander Mackenzie's discovery and recommended drilling north of Fort Norman.

The recommendation was accepted. That same year a six-man crew fought its way to the area by railway and river boat, a two-month trip through boiling rapids and clouds of blackflies with a drilling rig, a winter's supplies and a black ox. At a site that came to be known as Norman Wells, the crew's geologist, Ted Link, made an arc with his arm and told the crew to drill "anywhere around here." Later tests showed there was more luck than science to his choice: a hole 100 metres away would have missed the field.

Drilling started that fall but had to be suspended during the winter freeze-up. The men built cabins and weathered a bitter winter with temperatures down to minus 50° Celsius. The following August

they found oil at a depth of 235 metres, the country's first major oil find since the discovery in southwestern Ontario 63 years earlier. It was a remarkable achievement, but there was no economical way of shipping the crude oil south. Imperial built what is still the world's northernmost refinery there to provide products for the area: fuel for heaters, aircraft and generators.

The Norman Wells venture convinced Imperial that aircraft were essential to the development of the North. A trip that took several weeks by land could be done in a few hours by air. Imperial's planes were the first to penetrate Canada's north-land and were to play a pivotal role in Arctic oil exploration throughout the next several decades.

But with no nearby markets to justify further development at Norman Wells, Imperial turned back to the Prairies in its search for oil. In 1921 it acquired the Dingman company in Turner Valley and reorganized it as the Royalite Oil Company Limited – Royalite remained an Imperial subsidiary until it was sold in 1949 to help finance Imperial's postwar expansion.

Royalite hit pay dirt in 1924 with its Royalite No. 4 well, which roared in with a daily production of about 24 million cubic feet of gas impregnated with light oil, setting off the second Turner Valley boom. Other companies drilled in the area and found more oil.

But although a steady flow of oil was pumped from Turner Valley to Regina and Calgary right into the 1940s it wasn't nearly enough. By the mid-1940s more than 90 percent of Canada's crude oil was being imported, and Imperial had

The Story of Imperial Oil The Quest for Energy



Above: Alberta's Turner Valley was the site of the first commercial oil discovery in western Canada in 1914.

Right: the first flights to the Northwest Territories were made in 1921 by Imperial's Vic and Rene, two German Junkers transport planes.



almost decided that finding new oil sources in western Canada was a lost cause. Since 1919 the company had spent about \$23 million on exploration, sending geologists, seismograph crews and drillers from Manitoba to the Rockies. Little of consequence had been found since Turner Valley. Imperial had drilled 133 consecutive holes throughout the West – all of them dry.

So bleak was the situation that the company was even considering making gasoline from natural gas to supply the Prairie demand. It was only with the greatest reluctance that in 1946 Imperial management yielded to the urgings of its exploration department and sanctioned the drilling of a series of "last-chance" holes. When several wells failed to find anything encouraging, Imperial decided to drill one more exploratory well on the farmland of a grain farmer, Mike Turta, just outside the small town of Leduc, southwest of Edmonton. Drilling started on November 20, 1946.

Early in the new year, samples from the well suggested a healthy reservoir of gas and oil. "It was the most encouragement we'd had outside Turner Valley," recalled a driller. By then the news had leaked beyond the company. Imperial's public relations department convinced management to take an audacious step: to name the specific date when the wildcat well would actually come into production and invite the press and public to view it.

On the afternoon of February 13, 1947, several hundred spectators gathered, chilled to the bone by the crisp winter cold. Every eye was glued to the towering oil derrick. On the drill-rig floor an



Ted Link, Imperial's legendary geologist discovered oil at Norman Wells, N.W.T., in 1920.



A major crude-oil discovery near Leduc, Alta., on February 13, 1947, changed forever the face of the Canadian petroleum industry



Imperial crew worked feverishly to overcome a last-minute breakdown and to present the show that they were sure – well, almost sure – was about to begin. At four o'clock they pulled up the fourth swab (a kind of piston that is lowered down the pipe, then pulled back up, drawing oil, water and mud with it). A driller shouted: "Here she comes! It's oil!"

The well began to spurt, the muddy black flow gushed out into a sump pit, and the spectators (most of whom had never seen an oil well before), edged nervously away. Then, with the

turn of a valve, the flow was switched to a flare pipe 180 metres away. A driller lit some oil-soaked sacking tied to a long rope, twirled it around his head like a lasso and let it fly at the pit. With a roar and a whoosh the flare pipe caught fire, and flames leaped 15 metres, burning off the first mud-polluted oil. Leduc No. 1 was a winner. "It was as though a prince had been born," declared an exuberant employee.

Seldom in history can the turning point in the fortunes of an industry be pinpointed so accurately as in the case of Imperial's 1947 Leduc discovery. Canada's emergence as a major oil-producing nation can truly be said to date from this time. The field has been a spectacular success, having produced more than 200 million barrels of oil. Although nearing the end of its oil production, the field is still producing limited quantities. But its greatest contribution was the encouragement it gave the industry and the impetus it gave the nation's economy. The field provided the first conclusive evidence of rich oil-bearing Devonian reef structures in Canada and paved the way for the subsequent discovery of a whole chain of these structures in the West.

In the years that followed the Leduc discovery new fields with romantic frontier names were found in steady procession: Redwater, Golden Spike, Pembina, Judy Creek, Boundary Lake. Oil was found in Saskatchewan, Manitoba and British Columbia. The major discoveries alone accounted for about seven billion barrels of crude oil between 1947 and 1957 in western Canada.

Leduc's discovery brought an urgent need for more refining capacity on the spot. So Imperial

produced an instant refinery: for \$1 million it bought the Second World War refinery built by the United States government at Whitehorse, took it apart, moved the pieces to Edmonton by truck, train and ship and reassembled it like a gigantic jigsaw puzzle. With some upgrading over the years the refinery served the company well until 1975, when four Imperial refineries – at Edmonton, Regina, Winnipeg and Calgary – were replaced with the modern Strathcona refinery outside Edmonton, the largest in western Canada.

Petroleum on the move

By the late 1940s Imperial and the rest of the industry faced an unaccustomed but not unwelcome embarrassment. They had domestic oil to spare – a lot of it. They had eager markets in eastern Canada, but they had no way to get the crude oil there quickly and in large quantities.

Thus the era of "big oil" ushered in the era of "big pipe." Tank trucks, railway tank cars and ships all have their place in petroleum transportation, but the cheapest, most reliable way of moving large volumes of crude oil across Canada's vast land mass in all kinds of weather is by pipeline. So in 1949 Imperial and others formed the Interprovincial Pipe Line Company to build a line from Edmonton to Superior, Wisconsin, within easy reach of eastern markets. Originally it was intended to go only to Regina, but oil discoveries came so quickly that the plans were greatly revised even before they reached the drawing board.

What happened next was a 150-day wonder. In the spring of 1950, while pipe manufacturers

scrambled and bargained for steel, landmen flocked to assemble a right-of-way 18 metres wide through personal negotiations with thousands of owners across the Prairie provinces, North Dakota, Minnesota and Wisconsin. All were paid for the use of their land but not without some lively "horse trading."

With the right-of-way staked and cleared, large ditching machines carved a trench 1.5 metres deep diagonally across Alberta, southern Saskatchewan, a corner of Manitoba and into the United States. By autumn, in a record-breaking five months, 1,800 kilometres of pipeline were ready to carry oil to Superior. From there Great Lakes tankers carried it to market, as the shipping season permitted.

As western discoveries and eastern markets grew it became obvious that the bottleneck caused by winter freeze-ups on the lakes would have to be eliminated. The pipeline was extended from Superior to Sarnia, then on to the outskirts of Toronto and finally, in 1976, all the way to Montreal. Imperial remained a shareholder until 1990.

Over the years Imperial continued to modernize and expand its pipelines as well as to participate with other companies in the expansion of the Canadian pipeline system. Today Imperial owns or has a share in about 7,600 kilometres of crude-oil and product pipelines.

Imperial ships have also played a vital role in the transportation of crude oil and petroleum products. They plied the Great Lakes for generations, ever since the company bought



Above: the flat prairie of western Canada provided ideal conditions for construction of the interprovincial crude-oil pipeline.

Right: the *Imperial Woodbend*, launched in 1951, brought Alberta oil to eastern markets.

three barges in 1899 and, a year later, a small wooden tug, the *Reginald*, to tow them. The tanker *Imperial*, chartered by the company in 1902 and later purchased, was the first self-propelled tanker to operate on the Great Lakes. By 1920 there were nine tankers in service, and the Imperial flag was flying not only over the inland and coastal waters of Canada but over the high seas, as the company's vessels charted their courses over the oceans to Europe and South America to bring crude oil to Canada.

Aside from transporting crude oil and carrying fuel from Imperial refineries, the company ships had another important role: carrying mail, food and other supplies to some of the remote communities, reachable only by boat or plane, that lie along Canada's east and west coasts.

The heyday of the liners followed the discovery of oil at Leduc. By the early 1950s there were some 30 ships in Imperial's service. The biggest tankers of them all – in fact the largest freshwater tankers in the world at the time – were the *Imperial Leduc*, the *Imperial Redwater* and the *Imperial Woodbend*, all named after oil discoveries.

With the extension of the pipeline to Sarnia, however, the need for visit tankers ended. The last of the company's ships in regular service on the Great Lakes, the *Imperial Sarnia*, was sold in 1986 after 38 years in service. But as shipping on the Great Lakes dwindled the fleet faced a new challenge: plowing through the frozen sea to take fuel supplies to support development in the Arctic. The company first sailed to the Arctic in 1957 to deliver aviation fuel to Prohiber Bay (now Iqaluit) on Baffin Island, and Arctic deliveries are still undertaken on a regular basis.

Although tankers no longer play the pivotal role they once did in moving crude oil and refined products throughout Canada, they are still a necessary part of the company's operations. Imperial continues to maintain several coastal tankers, which are mainly engaged in distributing refined products to customers in the eastern and western coastal areas.

The frontier challenge

Despite the discoveries of the previous two decades, it was becoming increasingly clear by the 1960s that the conventional petroleum



reserves of western Canada, although substantial, were unlikely to prove capable of meeting all of the country's future oil and gas requirements. In eastern Canada Imperial's exploration program, carried out over a number of years, had been discouraging, and by the mid-1960s the company had brought all exploration activity in Quebec and the Maritimes to a close. Once again it was time to go exploring, this time in the last and most difficult of Canada's conventional oil-bearing regions: in the Arctic and under the waters of the Atlantic off Canada's eastern seaboard.

Imperial was no stranger to the North. The company had found oil at Norman Wells in 1920 and in the 1940s had explored in the area of Great Slave Lake in the Northwest Territories. Now it turned its attention to the unexplored but promising areas of the Mackenzie Delta and the Beaufort Sea and, still farther north, the islands of the high Arctic.

In 1968 Imperial drilled its first well in the Mackenzie Delta and in January 1970 found Canada's first Arctic oil at Atkinson Point on the shores of the Beaufort Sea. In 1971 the company discovered natural gas at Taglu in the Mackenzie Delta. By 1972 it was moving out into the Beaufort Sea itself, where its exploration permits covered waters to a depth of 18 metres.

The Beaufort Sea, however, posed special problems: ice covered it for nine months of the year. The ice was two metres thick and contained pressure ridges with keels as deep as 30 metres. It could move several kilometres a day and exert intense pressure on structures. Could a man-made structure resist such force?

The company's research group in Calgary tackled the problem. The answer was to build a structure that was as close to nature as possible: an artificial island. At first, in very shallow water, "sandbag-retained" islands of silt and sand were used. As exploration efforts moved farther offshore, into deeper waters, Imperial used a dredge to construct "sacrificial beach" islands with long, gradually sloping beaches onto which waves and ice could advance without harming the central drilling base. The largest, Isungmak, with a base as big as seven football fields, required almost five million cubic metres of sand to build. Over several years the company built 23 such islands, each costing between \$50 million and \$60 million.

For drilling wells in deeper waters of the Beaufort Sea Imperial developed the first submersible and refloatable drilling caisson. The doughnut-shaped, 8,000-tonne steel caisson, measuring 100 metres in diameter, was towed to a drilling site, mounted on a sand base and filled with sand to serve as a drilling platform.

During nearly 30 years of activity in the Arctic the company has acquired a wealth of experience in drilling, construction and logistics plus the technological expertise demanded by this difficult environment.

Results of Imperial's exploration in the western Arctic have been mixed. While no large pools of crude oil have been found, considerable quantities of natural gas have been discovered. The largest of these gas pools is Taglu, estimated to contain about three trillion cubic feet of gas, making it one of Canada's largest undeveloped gas fields. This field holds great promise for future production.



Above: icebergs encircle Issungnak, an artificial island in the Beaufort Sea.



Right: two artificial islands are reflected in the Mackenzie River, N.W.T.

The technologies developed by Imperial for building artificial islands in the Beaufort Sea enabled it to pursue what was to become the largest single project in its history – a \$600-million expansion of the Norman Wells oil field. The company had always known that this field contained a great deal of oil, but there were two factors barring its development: its distance from southern markets and pipeline systems, and the location of much of the oil under the Mackenzie River. Declining production from major oil fields in Alberta coupled with increased Canadian demand for crude oil in the 1970s, however, led to a decision to develop this field. After years of planning and public meetings with area residents and after obtaining approvals from governments, construction began in 1982.

Since a large area of the reservoir lies beneath the Mackenzie River (about five kilometres wide at this point), six artificial islands were built to allow 160 production wells to be drilled into the reservoir. These islands are "armor-plated" with boulders and concrete blocks and are the only ones in the world built to withstand the huge flows of ice that result each year from the spring breakup. From the wells, the oil and gas flow to the mainland through a network of pipelines buried deep in trenches under the river.

The expansion project was completed in 1985, increasing oil production from a modest 3,000 barrels a day to about 33,000 barrels a day and making the project the company's largest single source of conventional oil.

The refinery at Norman Wells supplies petroleum products to many western Arctic communities, and crude oil flows to southern markets through a pipeline stretching 870 kilometres south into Alberta.

The endless search for new energy supplies found Imperial moving into yet another frontier: the deepwater Atlantic off Canada's east coast. For more than two decades Imperial conducted extensive seismic work off the east coast and drilled several deep-water wells. Although no significant discoveries of either oil or gas have been found, there has been a major discovery by another operator at Hibernia, off the coast of Newfoundland, and the company recognizes that this frontier remains a valuable potential source of energy.

Fueling the future

While supplies of conventional oil have always been elusive, the existence of Alberta's oil sands has never been any secret. The world's largest single reserve of crude oil is a known quantity, underlying nearly 50,000 square kilometres of territory in northern Alberta – an area almost as large as Nova Scotia – and containing more than a trillion and a half barrels of oil.

But there's a problem – how to extract the oil at an affordable cost. Unlike conventional oil –

which has accumulated in underground reservoirs and which, when found, is sufficiently fluid to be pumped to the surface – this heavy oil, commonly known as bitumen, clings tenaciously to the sand in which it is embedded. It is extremely viscous and does not flow of its own accord. It has been aptly described as having the consistency of axle grease mixed with sand. And, complicating the recovery of the oil, the deposits are buried at varying depths.

In fact, only a fraction of this vast storehouse of heavy oil is ever likely to be recovered using today's technology. Even beginning to tap this vast resource has taken more than 25 years of research and development and hundreds of millions of dollars in high-risk investments. But even if only one percent were to be recovered, that would be considerably more than all of the conventional oil remaining in Canada. In some places, such as the Athabasca region of north-eastern Alberta, the deposits are near the surface and can be recovered using open-face mining techniques. But in other areas the oil-bearing sands lie too far below the surface to be recovered by mining, and alternative techniques have to be employed.

The Athabasca oil sands are home to Syncrude Canada Limited, the world's largest oil-sand mining operation. Construction of Syncrude, in which Imperial is a major participant, began in 1973 and production started in 1978. In this area the ratio of sand to bitumen is nine to one, which helps to explain why the operation is of such an enormous scale.

The Syncrude sands are mined by four mammoth draglines – giant 6,500-tonne excavators, each sporting a boom the length of a football field and a bucket the size of a double garage – and carried by more than 40 kilometres of conveyors to a processing plant, where the bitumen is extracted from the sand using steam and hot water and upgraded into high quality crude oil – more than 160,000 barrels of it every day. Early in 1991 Syncrude reached a milestone with the production of its 500 millionth barrel of oil.

Long before the construction of Syncrude was started, Imperial had begun examining another oil-sand prospect, at Cold Lake, south of the Athabasca oil sands, where the deposits lie at depths averaging 500 metres – too deep for mining. Here, in the early 1960s, the company drilled 10 evaluation wells and found substantial oil-bearing deposits. In 1964 Imperial established its first pilot-plant operation at Ethel Lake, designed to test various processes for the recovery of the oil. A second pilot was established at May Lake in 1972 and a third at Lemming in 1975.

The technology for commercial-scale operation of the Cold Lake deposits was developed at these pilots. The process is called cyclic steam stimulation (CSS). Steam, at a temperature of 300° Celsius, is injected under intense pressure into the oil-sand deposits through multiple wells. The heat from the steam thins the thick, molasses-like bitumen until it starts to flow. After the steam is shut off the same wells are used to pump the bitumen to the surface. As the reservoir cools bitumen production begins to taper off. At this point steam is again injected into the deposit. The cycle is repeated until the operation no longer produces enough bitumen to justify continuing the process. The wells have been drilled into the bitumen deposits from central locations, or pads, to keep surface disruption to a minimum.

During the late 1970s Imperial proposed using the steam-injection technique in a massive project to recover bitumen and upgrade it into 140,000 barrels of light crude oil a day. But, in 1981, rising costs and uncertainties about fiscal and economic conditions caused the company to put a halt to those plans. Instead, it decided to develop the deposit in a series of manageable stages as market and economic conditions allowed. Commercial bitumen production from the first two stages began in 1985. The Cold Lake project is Imperial's largest single source of non-conventional oil, producing more than 80,000 barrels of bitumen a day from its six commercial stages and two pilot plants. Part of the bitumen is piped to refineries in Canada and the United States for conversion into crude oil, while a portion is sold for a variety of uses such as producing asphalt for roads, shingles and roofing tar.

Nodding wellhead pumps are a familiar sight at Imperial's heavy-oil project at Cold Lake, where bitumen is produced from the Alberta oil sands.



After decades of research and experimentation, the promise of Alberta's oil sands is beginning to be realized on a major scale. As the country's production of conventional oil diminishes during the 1990s, this huge resource, through Syncrude, Cold Lake and other projects, will undoubtedly make an increasing contribution to Canada's energy supply.

Canada is also fortunate in possessing abundant supplies of another major source of energy, natural gas. Not only is natural gas finding a growing market as a clean-burning fuel for heating and generating electricity, it can serve to power automobiles and is used in the manufacture of thousands of different products, from a wide variety of plastics to fertilizers.

While Imperial has been active for many decades in exploring for and producing natural gas for domestic and export markets, in the second half of the 1980s the company moved to increase its presence as a natural-gas producer.

In 1987 it purchased the assets of Calgary-based Sulpetro Limited, a medium-sized oil and gas producer, and the following year it acquired the Alberta oil and gas production assets of Ocelot Industries Ltd. and the Canadian operating assets of United Canso Oil & Gas Ltd. In 1989 Imperial's production and reserves of natural gas were further increased with its acquisition of Texaco Canada Inc.

An interesting footnote to the company's history was provided in 1989 when natural gas began to be produced from the historic Leduc reservoir, from which most of the recoverable reserves of oil have been produced.

By the end of the 1980s these actions had strengthened Imperial's position in natural gas to the point where the company had become the second largest holder in Canada of natural-gas reserves – and the country's third largest gas producer.

The company remains Canada's largest producer of conventional crude oil and holds the country's largest proved crude-oil reserves.



Above: a tower for separating valuable liquids from natural gas rises above the Wapiti gas plant near Grande Prairie, Alta.

Below: a mammoth bucketwheel reclaimer is used for mining oil sands at Syncrude.



Expanding Horizons



Happy motoring

In a world where change is the norm, few things have changed more than the service station. Imperial stations have come a long way since the first one opened in Vancouver in 1907.

Crude though it was, that prototype incorporated something that customers wanted, something that was to remain the concept behind service-station development for the next 80-plus years – customer service.

It took a while, however, for the service station as it is known today to emerge. In the early years gasoline was generally to be found in a converted storage shed, hardware store or blacksmith's shop. By the onset of the First World War stations had become more permanent affairs, commonly housed in plain red-brick structures giving way in the 1920s to more elaborate designs with towers, gables and tiled roofs.



Three famous faces from *Hockey Night in Canada* broadcasts:
(top) Foster Hewitt, (middle) Murray Westgate, and
Philippe Robert.



By the end of the 1930s the major oil companies' quest for better and more individual product images had spawned a revolution in service-station design. Companies recruited the services of leading industrial designers, and design standards were transformed.

The 1930s also spawned the start of a major advertising event, one that dominated Imperial's advertising activities for many decades. Imperial's sponsorship of *Hockey Night in Canada* started on radio in 1936 with Foster Hewitt giving play-by-play reports, bringing hockey to fans across the country. This program went on to become a Canadian tradition. The company gave hockey another lasting tradition – the naming of three star players at the end of every game – introduced to promote the company's 3 Star gasoline.

The era following the Second World War brought further growth. Vehicle registrations went from less than a million and a half cars in 1945 to more than five million by 1960. To meet the burgeoning demand for gasoline and motor oil the company expanded its coast-to-coast distribution network.

In 1952, when *Hockey Night in Canada* made its television debut, Imperial introduced two of its most famous salesmen, actors Murray Westgate and Philippe Robert – Robert representing the neighborhood Imperial Esso dealer from Quebec, Westgate denoting hat and uniform on behalf of English Canada's Esso dealers. Few Canadians over the age of 35 will have trouble remembering Westgate's salute and his two signature phrases: "Good night and happy motoring" and "Always look to Imperial for the best."

Imperial advertising slogans

1920s & 30s Everywhere in Canada

1940s Buy at the Imperial sign

1950s Always look to Imperial for the best

1960s Put a tiger in your tank

1970s Explore Canada with Esso

1980s You make us better

1990s You're on your way with Esso

By the end of the 1950s the economy had tightened up. The industry entered an era of fierce competition, one that was to extend to the present day. Price wars flared up. Motorists were more mobile and more value conscious than ever before.

Petroleum marketing changed with the times, and Imperial adapted to the changes. It brought to Canada the first car clinic, which offered electronic diagnosis of an automobile's ills for a moderate price. Stations improved through a new color scheme and integrated designs of pumps, canopies and signs.

For many motorists the 1960s may chiefly be remembered for Imperial's marketing flair. How can anyone who owned a car then ever forget Imperial's advice to "put a tiger in your tank"?

"Put a tiger in your tank" was the company's greatest fuel-promotion slogan of all time



The Story of Imperial Oil Expanding Horizons

The company's tiger campaign was its greatest fuel promotion of all time. During the first four months of the program 800,000 tiger tails were given away to promote the power of Esso Extra gasoline.

And when, a decade later, rising oil prices were changing motorists' driving and gasoline-buying habits Imperial was to be found at the vanguard of such change. It responded to the new mood by reducing its promotions and phasing out low-volume, uneconomical stations and, in 1970, introducing self-service stations. These met with instant acceptance from a cost-conscious segment of the motoring public and now form the majority of the company's stations. Soon Imperial embarked on a major reshaping of its retail structure, offering consumers a full range of choice from full-service stations to do-it-yourself economy outlets.

Another change was the gradual decline in the number of stations with attached repair shops. More reliable cars, improved warranties and the growing popularity of specialty repair franchises (such as muffler shops) all contributed to this trend.

As customers turned elsewhere for major repairs, the company sought new ways to generate business. Recently it has embarked on a major program to make its service stations more convenient for motorists. Many sites now include both full-service and self-service pumps, convenience stores, fast-food outlets, automated banking machines and touchless car washes, programmed to adjust automatically to the shape and size of any automobile. At stations located on major highways, attached restaurants have become the rule rather than the exception.

Imperial has also paid increasing attention to the architectural integrity of the modern service station. The company's current service-station design, which was introduced in the early 1980s, was specifically intended to achieve strong consumer recognition for the Esso brand while meeting a high standard of roadside architecture.

And, wherever appropriate, Imperial endeavors to ensure that its service stations are in harmony with their surroundings. A good example is the station the company built in Unionville, Ont., in 1990. Much of the architecture of the village

centre is Victorian. Imperial didn't have a design that dated from the turn of the century, so it compromised with a style that harkens back to the late 1920s but fits in beautifully with its heritage surroundings.

But the most modern Imperial station of today still retains one thing in common with the company's first station – the emphasis on service and customer convenience.

Important though service stations are to Imperial's operations they account for less than half of the total sales of the company's petroleum products. More than half of the company's sales are to its industrial customers: pulp and paper companies, the construction industry, mining companies, the fishing industry, governments and transportation companies.

Since 1918, when the aviator Ruth Law flew an airplane fueled with Imperial gasoline in a contest against a racing car at Toronto's Sportmen's Park, the company has been a leading marketer of aviation fuels. There are now about 120 Esso outlets at airports and airfields across the land. During the late 1960s the company introduced its first aviation service station, called Avitar. Today the company operates Avitars at major Canadian airports, providing comprehensive facilities for private and business aircraft and their passengers and crews.

Whether a small outboard boat or a huge ocean-going ship, Imperial supplies them both. As a major supplier of marine fuel in Canada the company provides fuel to ships, fishing fleets, ferries, armed-forces vessels and ships of foreign registry docking in Canada.

When Canadian railways made the swift and total switch from steam to diesel locomotives in the 1950s, Imperial, with equal speed, produced a new line of fuel to run the powerful diesel engines. Diesel fuel is also used to fuel transport trucks and most heavy industrial equipment.

Over the years Imperial has been working hard to keep Canadians warm. In 1932 it marketed the first commercially viable blue-flame furnace. A year later the company began the first home-



heating service in Canada, one that now sells and services high-efficiency oil furnaces, air-cleaning units, humidifiers and air conditioners.

Asphalt, a construction material, is produced from selected crude oils and manufactured at three of the company's refineries. Asphalt had been used as a water sealant for centuries, but it was the coming of the automobile – and the demand for dustless, mudless, all-weather roads – that spurred the tremendous demand for it. Most of the asphalt Imperial produces is used for paving roads. It's also in demand as a roofing material.



A Home Comfort agent pays a mid-winter refueling visit to a rural customer in Newmarket, Ont.

Lubricants and specialty products form another important part of Imperial's business. Initially, such products were few and simple. They included lubricants such as Mica axle grease to keep wagons rolling and Eureka harness oil to soften leather and make it last longer. Although the brand names have changed, the company still produces these products more than a century later. But today there are hundreds more – everything from the oil the customer puts in his car to rail and marine oils. The company custom manufactures or supplies numerous industrial and process oils, waxes and greases, from the wax that coats fish nets to the oil that preserves telephone poles. Varsol, Canada's household cleaning fluid, Marvelube, the first detergent engine oil, and Uniflo, the first fuel-saving engine oil, were all developed by Imperial.

Such products are responsible for more than half of Imperial's petroleum-product sales. But in the mind of the public Imperial is forever associated with gasoline and rightly so. The company supplied gasoline for the first automobiles and

enters the 1990s as the largest gasoline retailer in Canada. Over the years gasoline has changed in composition and structure in keeping with the evolution of the automobile, and the company has been at the vanguard of those changes.

During the First World War, Imperial introduced its first major brand, Premier Gasoline, described in a company publication as "not a mixture, but a distilled refined product. Absolutely the best and most reliable gasoline you can find." As engine requirements became more sophisticated, Imperial met the challenge with its Imperial Ethyl gasoline, introduced in the 1920s, followed by 3 Star and Esso Ethyl gasolines in the 1930s and Esso and Esso Extra gasolines in the 1940s.

As part of Canada's move toward a cleaner environment, the first low-lead gasoline was introduced by the company in 1970. Premium unleaded gasoline followed in 1978 – Imperial was the first in Canada to make such a gasoline – and by mid-1990 the company sold only unleaded gasoline.

The high-technology, high-performance vehicles on Canadian roads today have presented Imperial with some of its greatest challenges in formulating superior gasolines. The company has responded with the introduction of new gasolines with advanced detergent additives that promote cleaner automobile engines and longer engine life.

As engines continue to evolve, so will the company's products. It is Imperial's way of paving a cleaner, more efficient future for its customers.



Above: Imperial introduced self-service stations in 1970.

Right: Vancouver's Avitar flight centre has been rated one of the best facilities of its kind in North America.

The growth of chemicals

Crude oil and natural gas are not only important sources of energy in their own right but they supply the building blocks for a variety of chemicals that have come to play vital roles in our everyday lives. Thus, such ingredients of petroleum as ethylene, butadiene and benzene find their way into fabrics, antifreeze, detergents, plastics, adhesives, paints and many other household products, while hydrogen is an important component of fertilizer.

Imperial gained its first experience in the petrochemical field during the Second World War, working with the Canadian government in an

effort to produce urgently needed synthetic rubber. Subsequently, the discovery of major reserves of crude oil and natural gas in western Canada provided sufficient raw materials for the establishment of a Canadian petrochemical industry.

In 1955 Imperial entered the chemical business directly with the formation of a chemical product department at Sarnia. In 1957 it opened a petrochemical plant to manufacture detergent alkylate, making Canadian detergent ingredients available to soap manufacturers for the first time.

The following year the company opened a second petrochemical plant in Sarnia – the most advanced of its kind and the largest in Canada – to produce a wide range of raw materials required by the chemical industry. Facilities to produce other petrochemicals were added in British Columbia, Quebec and Nova Scotia.

In the 1960s Imperial moved into the fertilizer market, first opening a string of fertilizer warehouses across the West and then, in 1969, opening its own giant \$50-million fertilizer-manufacturing complex near Redwater, Alta. This represented the largest single investment in the company's history to that time. The complex rises from the flat prairie like a Disneyland of shapes: a dome, a triangle and a storage building the size of three football fields. It is one of Canada's largest and most efficient fertilizer facilities, producing close to two million tonnes of fertilizer each year to help grow the world's food. And it is the largest supplier of fertilizer to farmers in western Canada.

Plastic resins manufactured at Esso Chemical's Sarnia plant can be processed into thousands of entertaining and useful products, such as the toys being used by these children.



The Story of Imperial Oil Expanding Horizons



At Esso Chemical's complex near Redwater, Alta., fertilizers have been produced since 1969 to serve domestic and export markets.

By 1970 Imperial's chemical operations had grown to make the company one of the largest producers of petrochemical products in Canada. That year Esso Chemical Canada was established as a separate division of the company to manage its chemical activities.

The ensuing years saw continued expansion of both the petrochemical and fertilizer operations. Major milestones included a new polyethylene plant and expansion of the ethylene and polyvinyl chloride plants in Sarnia; the expansion of the Redwater facilities in the early 1980s, tripling the output of the original facility; the relocation of Exxon Chemical Corporation's worldwide agricultural chemical technology activities from the United States to Redwater in 1985; and the purchase, in 1989, of Cascade Fertilizers Ltd., a liquid fertilizer manufacturer in western Canada.

Less visible but equally important have been moves to help the company's customers meet both the economic and environmental challenges of the 1990s. At the Redwater complex, for example, the existing product line has been expanded to include a couple of notable newcomers – controlled-release fertilizers and

biological products. Both promise economic and environmental benefits by delivering more yield while using less nutrients and are expected to play a large role in global agriculture in years to come.

New business fields

At various times in its history, as opportunities arose, Imperial has been associated with other enterprises.

The company began exploring for coal deposits in 1971 and has been a coal producer since 1981, when it purchased Byron Creek Collieries Limited in southeastern British Columbia.

In 1978 Imperial was a participant in a major uranium discovery at Midwest Lake in northern Saskatchewan, and that property became one of the principal interests of Esso Minerals Canada, which was created the same year. A mineral department had been formally established in the mid-1960s, and at one time Imperial was active in mineral exploration in eight Canadian provinces and in the Yukon Territory.

In 1964 the company purchased Building Products of Canada Limited, thus adding a wide variety of building materials to its product line. During the following two decades Building Products became a major Canadian producer and exporter of construction materials for commercial and residential buildings.

In the late 1980s, however, Imperial sold Building Products and disposed of its various mineral interests except coal to pursue the growth of its principal businesses of oil and gas.

production and the manufacturing of petroleum products and chemicals.

Within these core businesses, however, the company has continued to examine new opportunities for growth. One such opportunity – the acquisition of Texaco Canada Inc. – was to present itself at the end of the 1980s.

A landmark year

In early 1989 Imperial reached a landmark in its 109-year history with its purchase of Texaco Canada Inc. At a cost of \$5 billion it was the second largest corporate acquisition ever made in Canada, and it was described by some industry observers as the most important event in the company's life since the discovery of oil at Leduc more than 40 years earlier.

For a number of years Imperial had been seeking a major acquisition that would complement its strengths. The chance to acquire Texaco Canada provided just such an opportunity.

The assets of both companies added up to a near-perfect strategic fit. Texaco Canada possessed substantial reserves of conventional crude oil, which can be produced at relatively low cost. These reserves could help Imperial bridge what it expected to be a period of low and volatile oil prices during the early 1990s, allowing it to develop its major reserves of heavy oil – particularly in the oil sands – over a longer period. Texaco Canada also owned substantial reserves of natural gas and was a significant gas producer.

Texaco Canada's refinery at Nanticoke, Ont. (one of the most modern and efficient in North America), would be an excellent partner for Imperial's nearby Sarnia refinery. And Texaco Canada's network of service stations was particularly strong in Ontario and Quebec, thus complementing Imperial's marketing strength in other Canadian provinces.

The histories of Imperial and Texaco Canada have many common threads. Both trace their roots back to Ontario's pioneer oil fields. But geography is not the only common ground. Texaco Canada had also been extremely active in exploring for, developing and producing crude oil, natural gas and natural-gas liquids. Formed in Toronto in 1873 by John B. McColl and William Anderson for the purpose of selling lubricating and illuminating oils, Texaco Canada was seven years older than Imperial. By the turn of the century the company was well established from coast-to-coast.

At the end of the First World War it began to market gasolines as well as oils, greases, paints and varnishes. In 1927 the company, which by then had been renamed McColl Brothers, merged with Frontenac Oil Refineries Limited of Montreal, the marketer of Red Indian brand lubricants and specialty-type petroleum products.

A period of rapid growth in the 1930s placed a severe strain on McColl-Frontenac's capital, and The Texas Company of the United States was encouraged to invest in McColl-Frontenac common shares. In 1941 Texaco brand names, starting with "Sky Chief," were introduced in



Above: a contractor completes the conversion of a former Texaco Canada service station in Winnipeg.

Below: the ultramodern Nanticoke, Ont., refinery is ideally suited to produce the premium gasolines demanded by today's automobiles.



The Story of Imperial Oil Expanding Horizons

Canada, and two years later a crude-oil exploration and development subsidiary was launched.

In 1959 McColl-Frontenac's corporate name was changed to Texaco Canada Limited, and the red star with the green "T" became the company's trademark. A refinery was built at Eastern Passage near Halifax in the early 1960s to meet growing product demand in the Atlantic provinces and the area of the St. Lawrence estuary.

In western Canada an active exploration program resulted in major oil discoveries at the Wizard Lake and Bonnie Glen fields south of Edmonton in the 1950s and at the Nipist field north of Edmonton in the 1960s. Texaco Canada Limited and Texaco Exploration Canada Ltd. were amalgamated in 1978 and a new company, Texaco Canada Inc., was formed. That year the ultramodern Nanticoke refinery, representing the largest investment in the company's history, started operations. More recently, an \$80-million upgrading of the refinery has brought it to the forefront of refining technology in the areas of energy conservation and the production of premium unleaded gasoline.

On January 1, 1990, after a year of complex negotiations and comprehensive planning, Imperial and Texaco Canada formed a dynamic new organization. With this acquisition Imperial consolidated its position as the leading Canadian petroleum company for the foreseeable future.

Challenges and Opportunities



Research with results

Back in 1884, when Imperial was four years old, its biggest selling product was kerosene. It performed well, burning brightly in lamps and igniting easily in stoves. The only trouble was that Canadian kerosene had such a high sulfur content it was nicknamed "skunk oil." Imperial was determined to change that. It hired a German chemist named Herman Frasch to find a way to get rid of the smell. It took Frasch several years, but he did develop an effective desulfurization process, although he left the company before he actually patented it.

The value of kerosene has declined in the years since, but the value of research has risen. The company's leadership in research has led to many important developments in oil-finding techniques and refining and to a host of petroleum-derived products.

Today Imperial maintains the largest research operation of any



Above: research is vital to Imperial, supplying the new technology needed to locate, develop and process energy resources.

Below: the all-weather chassis dynamometer is big enough to work with the largest highway trucks and advanced enough to give Imperial an edge in new product development.



petroleum company in Canada. About 450 employees at laboratories in Sarnia and Calgary conduct research pertinent to all aspects of the company's business.

The Esso Research Centre at Sarnia is the most advanced research facility in Canada for developing and testing petroleum products and processes. It also carries out research in the petrochemical area. The research facility includes the Sarnia Process and Automotive Research Centre (SPARC). Completed in 1984 at a cost of about \$40 million, the centre is the most advanced facility in North America for the testing of petroleum products in road vehicles. A key part of SPARC is a vast stainless-steel facility that serves as a vehicle refrigerator or hot house, depending on the experiment. It is called an all-weather chassis dynamometer and is used to test petroleum products in all types and sizes of cars and trucks at temperatures that range from minus 35° Celsius to plus 40° Celsius, at humidities from 0 to 95 percent and at simulated speeds of up to 150 kilometres an hour.

Since the research centre's beginnings in 1974, the company has taken out more than 500 patents and made a number of technological breakthroughs that have had a worldwide impact on modern petroleum processing. Among them have been the development, in 1926, of a clay-treating process to improve the quality of gasoline; the phenol-extraction process in 1930 for treating crude oil fractions, enabling higher quality lubricants to be made; a better extraction process, EXOX N, which was developed in the mid-1970s and superseded the phenol process; several generations of hydrocarbon fluid-cracking processes; and, in 1971, DILCHILL, a process for removing waxes from lubricants to prevent them from solidifying in cold temperatures.

Researchers at the centre monitor the quality of more than 300 lubricants, reformulating them as required and developing new products to meet the ever-changing needs of the marketplace. Canadian breakthroughs in product development include multigrade universal diesel engine oils, premium unleaded gasoline and universal hydraulic oils.

The company has pioneered the development of products for Canadian markets, particularly for low-temperature conditions. In 1959, for example, the company developed a special ingredient, called a pour depressant, that is added to furnace and diesel fuels to improve their flow in cold temperatures. Superior low-temperature automotive lubricants and all-season grease also made their debut at the Sarnia research facility.

In addition to its work for Imperial, research is carried out for Exxon Corporation. The Sarnia



Under the watchful eye of a bear monitor, an ice island takes shape in the Arctic.

laboratory, for example, has responsibility for worldwide research on lubricating-oil processes for the Exxon family of companies. Because of this Imperial maintains a larger research staff in these areas than its own operations would justify, which creates more opportunities for scientists in Canada.

In Calgary, since the early 1950s, the company has conducted research aimed at developing new techniques for finding and producing conventional crude oil, natural gas, bitumen and coal. A major commitment to Canadian research was realized in 1989 with the completion of a new \$47-million research centre in the University of Calgary Research Park. The company also maintains a large outdoor water-filled test basin in Calgary. This facility, which is the largest of its kind in the world, was originally created to evaluate the impact of waves and ice forces on structures involved in offshore exploration and production. In recent years it has been expanded to allow environmental response techniques to be tested under natural conditions.

More than 40 patents have been issued to Imperial researchers from the Calgary laboratory since 1961 – in the areas of geophysics, well-drilling and testing, oil-and gas-production equipment and methods, heavy-oil recovery, offshore island construction and ice research.

The techniques employed at Cold Lake to recover bitumen from the oil sands are continually being refined to improve the project's productivity and economic efficiency. One development, pioneered by Imperial, is the use of horizontal wells, which allows more bitumen to be recovered from a given site.

The Story of Imperial Oil Challenges and Opportunities

This technique is also being increasingly used throughout the industry for recovering additional quantities of conventional oil.

The techniques and technologies used in commercial bitumen production at Cold Lake were developed almost entirely in Calgary. Since the cyclic steam stimulation process now in use can only recover the most accessible portion of this vast resource, current efforts focus on improving the process, developing follow-up processes to extend the productive life of the reservoir and exploring new ways to recover the bitumen economically.

Imperial has also been at the vanguard of the development of processes to improve oil production from mature wells. The company has advanced the miscible flooding process, in which a hydrocarbon solvent is injected into the reservoir to displace crude oil. This technology now plays a major role in domestic oil production.

In the Beaufort Sea in the western Arctic the company has been the industry leader for more than 20 years in the development of drilling platforms that can withstand the severe wave and ice conditions encountered in the region and has recently pioneered the use of spray ice to construct artificial ice islands for Arctic exploration. Spray ice is formed by spraying sea water into the cold air which causes it to freeze and fall as ice particles.

In the coming decades the laboratories in Sarnia and Calgary will continue to develop better oil recovery and refining technologies as well as new petroleum products to meet the future needs of Canadians.

Imperial and the environment

Imperial is committed to environmental protection and has demonstrated this through many activities and initiatives. Its concern for the environment goes back many years, to a time when there was little public concern in this area and little, if any, legislation regarding air, water and soil pollution. More than 70 years ago, for instance, the company's new refinery in Dartmouth incorporated a large modern separator to extract oil escaping from the sewer water before the latter was discharged into the harbor. That was no mean achievement for 1918, especially when one considers wartime production priorities.

In the 1930s, long before ecology became a household word, Alex McRae, an Imperial chemist, became concerned about complaints from residents of communities along the St. Clair River, downstream from the Sarnia refinery. They complained that on certain days the river water made terrible tea. McRae decided to do something about the problem. He cruised the river in a converted lifeboat called *The Juicy Scoopy*, scooping samples of water. He made tea with some of the water; the rest he sent to the laboratory for chemical analysis. He figured, correctly as it turned out, that tea magnified the unpleasant taste of certain chemicals, mainly phenols, escaping from the refinery into the river. As a result of his early work, Imperial pioneered the application of biological oxidation to reduce phenols in refinery discharges. Through this process, microscopic organisms, so tiny that billions can live on a dime without overcrowding, consume the phenols and convert them into

carbon dioxide and water. This process is now in common use in refineries throughout the world.

In 1963 the company ordered its Great Lakes ships to retain food wastes and other garbage for disposal ashore. This was almost eight years before similar regulations were imposed on all Canadian-flag vessels. Later Imperial was the first company in Canada to use micro-balloons, tiny plastic bubbles injected into storage tanks to reduce evaporation and retain odors. As well, the company pioneered the use of smokeless flare tips at refineries.

For more than a decade a research program has been in place in Calgary devoted to developing oil-spill-response technology with the help of several Imperial scientists. Imperial has developed unique expertise in remote sensing and the tracking of spills, in methods to deal with spills under ice, in the use of dispersants and in oil burning. And at all of the company's local operating units employees are well trained and have the equipment needed to respond to a crisis.

Imperial played an active role in the establishment of cooperative action groups to protect the environment. In the early 1970s it assisted in the formation of two major industry associations – the Arctic Petroleum Operators Association and the Petroleum Association for Conservation of the Canadian Environment (PACE – now Canadian Petroleum Products Institute). More recently the company's chemical division participated in the development of Responsible Care, a program of the Canadian Chemical Producers' Association that sets out codes of conduct for all aspects of the manufacturing and handling of chemicals.



Esso Chemical is one of the leading supporters of the Responsible Care initiative of the Canadian Chemical Producers' Association.

Canine detectives



Recently, Imperial has enlisted some rather unusual skilled workers to help locate leaks in underground pipelines. Several Labrador retrievers have been trained to indicate the presence of an odorous fluid, Teksecent, developed by the company. Teksecent is injected into the pipeline, and if there's a leak in the line the dogs smell it as it rises to the surface. The retrievers' noses are so sensitive they can detect leaks with Teksecent concentrations as low as one part per billion-billions. That's like finding one billionth of one drop of water in an Olympic-sized swimming pool. These canine detectives have found leaks in frozen ground as well as in lines buried for more than 30 years.

Right: the company is constantly working to develop improved gasolines that promote cleaner automobile engines and a longer engine life.

The company believes one way of protecting the environment is to learn more about it. For this reason it provides financial support for environmental research and has, for example, helped to establish the Environmental Research Centre at Trent University in Peterborough, Ont.

Imperial also supports the efforts of non-profit environmental associations, including the Pollution Probe Foundation, the Canadian Nature Federation and the Conservation Council of New Brunswick. It has also supported a World Wildlife Fund program to reintroduce the swift fox to its Canadian Prairie habitat.

The company has been a long-term supporter of the Society, Environment and Energy Development Studies Foundation (SEEDS), which has helped nearly one million Canadian students learn how society, the environment and energy development interact.

Its three-W pledge to the environment – doing what it can, when it can, where it will make the biggest difference – has been put into action across the country. At its heavy-oil project in Cold Lake, the company has found a way to treat and recycle the water used for steam injection, reducing the amount of fresh water needed. To help combat urban smog, the company has recently spent \$7 million to reduce emissions of gasoline vapors from its distribution terminals for petroleum products in Toronto and Vancouver. It has also offered cleaner-burning reduced-emission gasolines in Vancouver and the lower mainland of British Columbia during the summer months, when smog levels are at their worst.

The Story of Imperial Oil Challenges and Opportunities

A program to reduce hazardous wastes at the company's chemical operations in Sarnia, initiated in 1981, had resulted in a 93-percent reduction of liquid hazardous wastes and a 75-percent reduction of solid hazardous wastes by the end of 1990.

The company is also developing new forms of industrial plastic packaging that use post-consumer waste. And in 1990 it introduced engine and hydraulic oils containing more than 50 percent re-refined oil. That's a boost for the environment, since it provides a market for used oil, encourages recycling and therefore helps to keep used oil from contaminating the country's sewers, streams and landfill sites; it also helps to conserve this non-renewable resource.

As a leading industrial company and major producer of petroleum products and chemicals, Imperial believes it has a vital stake in the development of environmental public policy in Canada and is committed to taking an active role.





Like its counterparts across Canada, the emergency response team in Samia is on 24-hour-a-day call.

This commitment has led to the publication of a number of discussion papers on global warming, air quality and Canada's Green Plan. These have been widely distributed within the company and to

governments, special-interest groups, the media, businesses, universities and schools.

The company's commitment to the environment is backed up by a network of environmental specialists who support the company's operations across the country. At Imperial, environmental protection continues to be an integral and essential part of hydrocarbon development.

Imperial in the community

For generations Imperial has shown concern for people, inside and outside the company. Inside the company it has provided a culture that respects the talents and nurtures the goals of its employees. As well, it is firmly committed to protecting the health and welfare of those employees. It was the first Canadian company to adopt, in 1918, a system of joint industrial councils – a mechanism for dealing with labor-management concerns. Over the years the system has proven highly effective as a means of resolving problems and developing improvements in the workplace.

More employee-oriented programs followed in 1919. An eight-hour working day was introduced.

For anybody who had been with the company a year or more, it offered a life-insurance policy. Retired employees weren't left out either; Imperial developed its own pension plan. In addition, the company started a benefit program that provided assistance to employees with illnesses not covered by Workers' Compensation and for injuries that occurred off the job.

In 1932 Imperial became the second company in Canada to adopt the five-day work week. Five years later employees were given holidays with pay. In 1939 the company savings plan – through which the company makes a substantial contribution toward employee savings – was started. In 1953 Imperial became the first Canadian company to appoint a full-time industrial hygienist to seek out and eliminate hazards to the health and safety of its people. The company was one of the first to support employee health centres that offered company medical examinations. And the 1970s saw four- and three-day compressed work weeks and flexible hours.

Imperial offers employees a comprehensive benefit plan, with items such as subsidized physical fitness programs and the payment of higher-education tuition for children of both current employees and annuitants; a program that started in 1962. The company strives to provide flexible work arrangements to help employees balance work and family needs. As well, it is committed to the principle and practice of equal opportunity.

Since the turn of the century the company has supported a wide spectrum of community activities. Beginning in 1929, for example, it



La Revue de l'Imperial



Imperial Oil Review



Started in 1917, the *Imperial Oil Review*, the company's general-interest magazine, is published in English and French.

presented *The Imperial Oil Hour of Fine Music*, a weekly series of 26 hour-long concerts of classical music broadcast live over a network of stations from Montreal to Vancouver. The Imperial Oil Symphony Orchestra brought together 50 of the country's most accomplished musicians and set a standard for excellence in symphonic music.

In 1948 the company sponsored the film classic *The Loon's Necklace*, which recounted in sensitive and lovely images the myth of how the loon came by its distinctive neck markings.

In recent years the number of community organizations and projects supported by Imperial has increased dramatically. One of the prime ways the company provides that assistance is through its corporate contributions program, which supports about 1,500 organizations across Canada and has helped to sustain the company in a leading philanthropic role.

From the beginning Imperial has supported a broad range of community interests, including education, health, welfare, community services, culture and sport, believing that it has a responsibility and an obligation to support the social and cultural fabric of the country. The company believes it should do more than operate a business in a community; it should be an integral part of all the communities in which it operates. By providing support to worthwhile causes Imperial helps those communities get on with the business and the enjoyment of life. And, of course, this attitude is as essential to the long-range health of the company as it is to communities; Imperial will continue to prosper only as long as the communities in which it operates remain healthy.

The Story of Imperial Oil Challenges and Opportunities

Imperial has touched every community in the country, providing homes with heating oil and fueling family cars. But it has also reached out in hundreds of other ways.

Consider Imperial's support of education. Over the years the company has supported building campaigns and other capital projects – the bricks and mortar of the education system. It also has supported many unique initiatives. The university research grants program, for example, has supported Canadian university research since 1951. Imperial awards annual grants averaging \$10,000 each to research projects in the technical and social-science fields.

The *Imperial Oil Review* magazine, distributed four times a year in English and French to about 65,000 Canadians, aims at helping Canadians learn more about their country and about their fellow Canadians. Since 1980 the magazine has sponsored an annual lecture series with the object of supplementing the academic resources of some of the smaller Canadian universities by providing a series of distinguished guest lecturers in the fields of science, fine arts and business.

As well, the company has encouraged the arts, supporting such organizations as the National Ballet of Canada, Montreal's Théâtre La Licorne, the Guelph Spring Festival, the Stratford Festival and many more.

Imperial was a trailblazer in the acquisition of a corporate art collection, buying Canadian art before it became fashionable to do so. In 1965 a decision was made to develop a permanent collection of Canadian art, with the twofold



Imperial's support helps many young Canadians, from aspiring ballerinas and little-league hockey players to a disabled youngster who realizes his dream of horseback riding.



objective of furthering public awareness of the visual arts and of supporting the Canadian art community. By the 1970s Imperial's art collection was frequently on the road, touring communities across the country. In recent years the primary purpose of the collection has been the enhancement of the employees' work environment. Today, virtually every piece in the collection, which includes nearly 8,000 items, is displayed in Imperial offices across the country.

Increasingly in recent years Imperial has initiated projects of its own with the purpose of enhancing Canada's cultural awareness. One of the most ambitious examples was the company's 1980 centennial project, *The Newcomers*, a series of seven hour-long television dramas, commissioned by the company, that trace the contribution of immigrants to Canada's social history.

And then there is the company's support of sports activities. Amateur hockey is a major recipient of this support, because of its strong community roots. Each year the company awards more than 75,000 medals and about 400,000 certificates of participation to young Canadian hockey players through its Esso Medals of Achievement program, initiated in the early 1980s. The medals recognize improvement, achievement and fair play.

Imperial has also been a major sponsor of amateur swimming in Canada, contributing nearly \$4 million to the Canadian Amateur Swimming Association (CASA - now Swim Canada Natatori) since 1978. In 1981 Imperial introduced an ambitious national program called Esso Swim Canada to encourage youngsters, including those with disabilities, to participate in the sport.

The Story of Imperial Oil Challenges and Opportunities

Imperial also supports many health and welfare activities, and often employees are deeply involved in this area. Toronto's 102-year-old Doctors Hospital, for example, has recently been given a \$200,000 contribution toward its redevelopment, and for many years several Imperial executives have acted as advisers to the hospital.

The annual *Telethon of Stars*, broadcast since 1977 throughout Quebec, features stars from across North America and Europe and raises money for childhood-disease research at two hospitals in Montreal. Imperial has supported the program for several years.

Imperial and its employees and annuitants support a number of community charities. One is the United Way. Another is The Easter Seal Society, which benefits from Thankful Tankful campaigns across the country. The campaigns involve Esso retailers, who pledge to contribute one cent out of their own pockets to the Easter Seal Society for every litre of gasoline sold on Thankful Tankful day. Contributions are then marched by Imperial.

Imperial has also been a consistent supporter of community-service programs. The company supports a range of innovative services for rape victims, single teenage mothers, prison inmates and released prisoners. A Calgary-based program - Fully Alive - that is designed to help those 50 years and over live full and meaningful lives has benefited from Imperial's support for several years. So successful has the program become that its courses are now being offered in cities and towns throughout Canada.

Early in 1990 the company introduced the Volunteer Involvement Program (VIP) to encourage its people to get more involved in community service. Under this program current and retired employees and their spouses doing volunteer work for a community group can apply on behalf of that organization for a grant from the VIP fund. The kinds of projects the company is supporting through VIP range all the way from a Native Women's Transition Centre in Winnipeg to the purchase of air-sea rescue equipment for a volunteer fire department in the Maritimes.

Young Canadians recently got a boost from the company with an exciting new Canada Kids program to assist, encourage and develop the youth of Canada through the sponsorship and development of new programs and charities.

Imperial's staunch commitment to corporate philanthropy recently led it to become a corporate leader in the national Imagine campaign. Initiated by the Toronto-based Canadian Centre for Philanthropy, Imagine is a program aimed at increasing the amount of time and money Canadians and Canadian businesses contribute to non-profit causes.

In all these ways and more, Imperial has demonstrated its concern for the well-being not only of its own employees but also of the communities and the nation upon which it depends for its continued existence.



Toward Tomorrow

Imperial has been part of the fabric of Canadian life since the company was founded in London in 1880 by 16 Canadian businessmen. It was the largest Canadian oil company of its time and remains so as it enters the 1990s. Although it is 70 percent owned by Exxon Corporation, Imperial, with its all-Canadian board of directors and its 11,000 Canadian employees, remains totally Canadian in operations and outlook. Some 19,500 Canadian residents hold shares, and the company is widely recognized for its pursuit of policies and practices that support the Canadian economy, such as its "buy Canadian" policy.

The company has long had a reputation for fair and ethical business practices. Frederick Fitzgerald, the first president of Imperial, who was described as "a man of unbending honor and incorruptible honesty," was the first in a long line of leaders

who fostered a strong corporate culture oriented toward high ethical standards.

Imperial has had a formal code of ethics for more than 20 years. Its corporate ethics booklet outlines the company's expectations of behavior with respect to business dealings. The booklet stresses the need for integrity in plain language: "No one in the company, from the chief executive to the newest employee, is ever expected to commit or condone an illegal or unethical act, or to instruct other employees to do so."

The 20th-century philosopher and mathematician Alfred North Whitehead once observed that the art of progress lies in preserving order amid change and preserving change amid order. Imperial's experience bears him out. From domestic refiner and distributor of kerosene more than 100 years ago to major integrated petroleum company today, Imperial's constant companion has been change: in sources of energy, in economic and political climates, in attitudes toward the role of the private corporation.

Were the founders of Imperial alive today it is likely that they would be impressed – but, perhaps, not unduly surprised – by the extent to which the company has grown. After all, they laid a firm foundation and had some idea of what enterprise and initiative could accomplish.

What might surprise them, however, is the wide-ranging nature of Imperial's business today. The oil and gas business has become more complex, more subject to rapid technological change and

more susceptible to global energy trends and international competition than it was even a decade ago.

The company has also become increasingly involved in areas that go beyond the historical bounds of business. For example, the degree to which companies such as Imperial have become responsive to the educational, social and cultural needs of the many communities in which they operate would surprise 19th-century business leaders. Such a broadened corporate role has become generally accepted only in recent years, and Imperial has played a pioneering role in its development.

But despite the many changes that have occurred over the years, the basic mission of the Imperial of today remains very much the same as it was when the company was founded well over a century ago: to carry on its business in a fashion that best serves the diverse needs of its many stakeholders – customers, present and past employees, shareholders, suppliers, the communities in which the company operates, and, of course, Canadian society as a whole.

In accordance with petroleum industry practice, this booklet expresses crude-oil volumes in barrels and natural-gas volumes in cubic feet. All other figures are metric.

The term "Company" refers to Imperial Oil Limited and its subsidiaries.

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